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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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COATS & BENNETT, PLLC				
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RALEIGH, NC 27602				
EXAMINER				
HECKENBERG JR, DONALD H				
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1722				
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
09/814,509	KOREN, ROBERT DOUGLAS	
Examiner	Art Unit	
Donald Heckenberg	1722	06

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 17-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-14, and 16 is/are rejected.
- 7) ☒ Claim(s) 12 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. Upon reconsideration the restriction requirement between Group I (claims 1-9) and Group II (claims 10-16) is deemed improper as the inventions are related (note Applicant's arguments filed January 20, 2004). Therefore the restriction between these two groups is withdrawn. However, the restriction between both Groups I & II (claims 1-16) and Group III (claims 17-22) is still deemed proper, and thus maintained.

In response to the restriction requirement set forth in the previous Office Action, it is stated that Applicant "traverses the restriction as between the Group I and Group II claims, but does not traverse the restriction of the Group III claims." This statement and has been interpreted as indicating Applicant is not traversing the restriction requirement between either Group I or Group II (both apparatus claims) and Group III (method claims). Thus, Applicant's response has been interpreted as electing Groups I & II (claims 1-16) without traverse with respect to these claims and Group III (claims 17-22). An action on the merits of claims 1-16 follows below, and claims 17-22 are withdrawn from further consideration.

It is noted that the restriction requirement of the previous Office Action also set forth a species restriction requirement between embodiments where the molds have a circular shape and molds which have a rectangular shape, and that

Applicant did not respond to this requirement. However, upon reconsideration this restriction requirement is not deemed proper, as there is not a significant burden to examine the two species together. Therefore the species restriction requirement set forth in the previous Office Action is withdrawn.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 16 recites that the "extraction member has a larger cross-sectional area than said hollow interior." The only description of this limitation in the disclosure is in the specification at p. 2, ll. 18-19, which merely states: "The extraction member has a cross-sectional area that is larger than that of the inner mold." Moreover, none of the drawings of the

instant application show the extraction member as having a larger cross-sectional area than that of the hollow interior of the inner mold. In all of the drawings, the extraction member fits inside the interior of the inner mold (see figures 2-6), thus it is not possible for the extraction member to have a larger cross section inner mold because the extraction member. Further it not apparent how any object could fit inside another object, with the inside object having a larger cross-sectional area than the outer object. The disclosure of the instant application therefore fails to teach one of ordinary skill in the art how to construct and extraction member fitted within the interior of a mold with the extraction member having a larger cross-sectional area than that of the interior of the mold.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As described above in the rejection under 35 U.S.C. 112, first paragraph, claim 16 recites that the "extraction member has a larger cross-sectional area than said hollow interior," yet it not understood how any object could fit inside another object, with the inside object having a larger cross-sectional area than the outer object. Therefore, as the limitation of claim 16 is impossible to discern, it is indefinite.

The specification of the instant application also describes the surface area of the extraction member as being greater than that of the inner mold (see for example, p. 7, ll. 18-19). The drawings appear to support this description, as all the embodiments show the surface area of the extraction member being larger than the surface area of the inner mold. Moreover, this allows for one of the feature of the inner mold folding and collapsing upon itself when the vacuum is applied which is described as an aspect of the invention (see figure 4, p. 2, ll. 19-21, and p. 18-21). Therefore, for purposes of further examination on the merits of claim 16, it will be assumed that Applicant actually intended to indicate in the claim that the surface area (as opposed to cross sectional area) of the extraction member is greater than the surface area of the hollow interior.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 9-11, 13-14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Bonet Sirera (U.S. Pat. No. 3,822,106).

Bonet Sirera discloses a molding device. The device comprises an circular outer mold (1a & 1b) and a flexible circular inner mold (13) spaced inward of the outer mold (see figures 2-3). The inner mold comprises a hollow interior in which an extraction member (11) is sized to fit within. The extraction member is provided with four radial member arms (19) extending outward from a center section into each corner of the hollow interior of the inner mold (see figure 3). A vacuum source is provided to apply a vacuum to the hollow interior of the mold to allow for the inner mold to collapse the inner mold against a surface of the extraction member (see figures 2-3 & col. 2, ll. 60-63). The hollow interior of the inner mold as well as the extraction member are provided with a taper along their respective lengths (see figure 6, showing the upper

section of the interior and extraction member to be wider than the lower sections, with tapered section approximately $1/5$ of the way down the length separating the wider upper section and lower section).

Bonet Sirera further discloses the apparatus to be such that the extraction member has a larger surface area than the hollow interior (see figures 2 and 5) including at the bottom of the inner mold (see figure 6). A top (20) is positioned across an upper surface of the inner and mold, with the top comprising a duct leading between the hollow interior and a vacuum source (see figures 1 & 6, and col. 2, ll. 48-63). Bonet Sirera also shows the radial member arms to have rounded outer edges that contact the inner mold (see figure 4).

8. Claims 1, 7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Pratt (U.S. Pat. No. 3,290,728).

Pratt discloses a molding apparatus comprising a circular outer mold (10) and a circular inner flexible mold (26) comprising a hollow interior (figure 2). An extraction member (24) sized to fit within the hollow interior of the inner mold (figure 2). A vacuum source is also provided to apply a vacuum to the hollow interior of the inner mold to collapse the inner mold against a surface of the extraction member (figure 3 and

col. 4, ll. 67-75). Pratt further discloses the extraction member to have curved sides (figures 2-3).

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonet Sirera in view of Asserback (U.S. Pat. No. 4,119,695).

As described above, Bonet Sirera discloses a molding apparatus with the inner and outer molds having a circular shape. Bonet Sirera does not disclose the inner and outer molds to have a rectangular shape, or the extraction member to have a substantially diamond-shape.

Asserback discloses a molding apparatus for creating hollow elements. Asserback's apparatus comprises a flexible inner (11) and an outer mold elements (1). The inner mold is used with a more rigid extraction member (10) and a vacuum for molding the inner hollow section and removing the inner mold upon completion of molding (col. 2, ll. 38-49 and col. 3, ll. 5-25). Asserback demonstrates the changing of the shape of inner mold as well as the outer mold to produce products with different shapes (figures 2-4 and col. 3, ll. 33-41). One of the shapes Asserback provides is a rectangular inner mold, with a corresponding rectangular extraction member (figure 4), which is in effect substantially a diamond shape when viewed at an angle.

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the inner and outer molds of Bonet Sirera to be different shapes, such as a rectangle, because this would allow for different shaped products to be molded as suggested by Asserback. In

modifying the apparatus of Bonet Sirera to produce a rectangular shape, the extraction member would take on a substantially diamond shape as suggested by Asserback.

12. Claims 12 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest a device for molding a member with the combination of features recited in claims 12 or 15. The closest prior art disclosed by Bonet Sirera and Pratt is discussed above. Neither Bonet Sirera nor Pratt discloses the extraction member to have a substantially cruciform shape. Nor is it suggested in any of the other prior art of record how the extraction member could be modified to have a cruciform shape and still be used with an inner mold and vacuum source.

Bonet Sirera and Pratt also do not disclose an outer housing extending over an exterior of the outer mold, with the outer housing having an indexer with a recessed section for

positioning a bottom of the inner mold. Moreover, none of the prior art of record discloses such an arrangement as a modification to Bonet Sirera and Pratt.


14. The following reference cited but not relied upon is considered pertinent to the instant application:

Buxton (U.S. Pat. No. 3,072,995) discloses an apparatus for casting voids comprising inner and outer mold members (see figure 1). A plurality of different shapes are provided for the inner mold member (figures 2-4).

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Heckenberg whose telephone number is (571) 272-1131. The examiner can normally be reached on Monday through Friday from 9:30 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at (571) 272-1151. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<<http://pair-direct.uspto.gov>>>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Donald H. Eskenberg
February 8, 2004